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09/766,004	01/19/2001	John A. Schlack	T721-21	7949

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EXAMINER

DEMICCO, MATTHEW R

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,004

Applicant(s)

SCHLACK, JOHN A.

Examiner

Matthew R Demicco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-35, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 15 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2x8/04, 12/02, 8/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 9, 11, 16-21, 23, 29, 31-33 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,463,585 to Hendricks et al.

Regarding Claim 1, Hendricks discloses a system for delivering targeted advertisements to subscribers (Col. 26, Lines 14-18) in a television service network environment (Col. 9, Lines 23-26), the system comprising an ad scheduler (Col. 27, Lines 48-50) for providing an ad schedule (switching plan, Col. 28, Lines 1-13 and Col. 26, Line 36-41) based on various targeting criteria (Col. 27, Lines 52-55) which includes demographics and viewing habits of a user (Col. 26, Lines 24-30). Such viewing habits may include channels a user watched and for how long and what the user tuned to during a commercial break (Col. 20, Lines 20-25). This reads on the claimed channel change statistical information. Further, the spot placement engine determines a switching plan based on break timing (Col. 27, Lines 48-50). This reads on the claimed avail time information.

Hendricks further discloses a multiple presentation stream generator (See Figure 1, Operations Center 202) for generating a plurality of presentation stream groups. The

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operations center creates television program and control information signals (Col. 10, Lines 61-67) and sends groups of programming to a plurality of head-ends (Col. 12, Lines 10-13 and Col. 13, Lines 9-15). As stated above, each stream group contains a plurality of television programs and control data. As is well known in the art, such television programs are broadcast to users on channels. This reads on the claimed stream groups corresponding to a particular programming channel. Each stream group comprises a plurality of television programs as stated above and it is implicit that each head-end is operable to receive the same television programming due to the fact that the operation center *may* send different groups of programs to different head-ends (Col. 12, Lines 10-13). This reads on the claimed each presentation stream group being composed of a plurality of multiple presentation streams (different television programs) that are carrying the same programming. It is inherent that a single television program transmitted to two different head-ends would have the same avails, that is, commercial breaks scheduled at certain times in the program, due to the fact that television shows are created with such avails in mind. Hendricks further discloses that the operation center may customize the packaging of programs for different markets (Col. 11, Lines 16-22) and that the advertisement placed in a commercial break is a default targeted ad that is most appropriate for the audience (Col. 27, Lines 56-62). This reads on the claimed each presentation stream (television program) carrying advertisements directed to different advertiser-specific market segments (overall audience) according to the ad schedule.

Regarding Claim 2, Hendricks discloses a system as stated above in Claim 1, further comprising at least one routing station (See Figure 1, head-end 208) for receiving

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the plurality of presentation stream groups from the MPS generator (Col. 13, Lines 8-12) and a delivery network (via satellite 206) coupled to the generator and the routing station (Col. 13, Lines 8-15) for delivering the plurality of presentation stream groups from the MPS generator to the routing station.

Regarding Claim 9, Hendricks discloses a system as stated above in Claim 2, wherein the operation center is operable to deliver content directly to the set top terminal (Col. 15, Lines 14-17 and Col. 18, Lines 20-28). This reads on the claimed routing station being located at a set top box.

Regarding Claim 11, Hendricks discloses a system as stated above in Claim 2, wherein video data is transmitted from the operations center to the head end using compressed digital data on a satellite transmission (Col. 9, Lines 26-33). This reads on the claimed delivery network being a digital broadcast satellite network.

Regarding Claim 16, Hendricks discloses a system as stated above in Claim 1, further comprising a storage unit coupled to the MPS generator for storing a library of advertisements to be inserted into the presentation streams (Col. 11, Lines 5-15).

Regarding Claim 17, Hendricks discloses a system as stated above in Claim 1, further comprising a data collector for collecting channel change data from a group of subscribers (Col. 20, Lines 10-27) and a statistics module, coupled to the data collector, for performing calculations on the channel change data and thereby generating channel change statistical information (Col. 20, Lines 28-35).

Regarding Claim 18, Hendricks discloses a system as stated above in Claim 17, wherein a collection module receives programs watch data from the set top terminals

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(Col. 33, Lines 31-32). Further, the data is only received during regular polling cycles (Col. 13, Line 60 – Col. 14, Line 12 and Col. 68, Line 39 – Col. 69, Line 46). Therefore, the set top must collect the programs watched data and store it until the head end polls it (Col. 63, Lines 15-35). This reads on the claimed data collector being located at the set top box. Each set top terminal is operable to build a profile for each viewer and store the profile in memory according to the viewer's name (Col. 66, Lines 37-51). Because the set top is operable to store a plurality of different demographic profiles including programs watched data, this reads on the claimed data collector for collecting channel change data from a group of subscribers.

Regarding Claim 19, Hendricks discloses a system as stated above in Claim 17, wherein each head end compiles viewer data (Col. 20, Lines 4-11). This reads on the claimed data collector being located at a head end of a television programming delivery system.

Regarding Claim 20, Hendricks discloses a system as stated above in Claim 19, wherein the network controller (214) in the head-end (208) is operable to utilize demographic information to target commercials to subscribers (Col. 58, Lines 10-17 and Col. 63, Lines 60-67). The network controller processes the data (Col. 65, Lines 47-48) and stores the analyzed data in the viewer profile database (Col. 66, Lines 16-66), including reviewing a user's program watched data and statistically comparing it with a test group. This reads on the claimed statistics module located at the head end.

Regarding Claim 21, see Claim 1 above.

Regarding Claim 23, see Claim 11 above.

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Regarding Claim 29, see Claim 9 above.

Regarding Claims 31-33, see Claims 17-19 above, respectively.

Regarding Claim 38, see Claim 16 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-8, 22, 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of U.S. Patent No. 6,181,334 to Freeman et al.

Regarding Claim 3, Hendricks discloses a system as stated above in Claim 1, wherein the routing station (head-end) is operable to make on-the-fly programming changes in accordance with a user request for the purposes of interactive television services (Col. 14, Lines 13-24). What is not disclosed, however, is a plurality of routing units for receiving the plurality of presentation stream groups (data transmitted from the operations center), wherein one of the routing units selectively switches between the presentation streams (television programming) in the stream group, only in response to a channel request from a subscriber served by the routing station. Freeman discloses a cable television system (See Figure 1) wherein a plurality of video signals are provided (Col. 4, Lines 17-31) for interactive use. Further disclosed is that video signals are routed

to a central switching station such that switching between various videos is accomplished at the head end rather than at the receiver (Col. 8, Lines 32-39). A user is operable to make a channel selection and the switching station routes the desired signal to the transmitter, which transmits the signal on a cable channel to the user (Col. 8, Lines 39-49). This reads on the claimed routing unit for receiving the plurality of presentation stream groups and selectively switching between the streams in response to a channel request from a subscriber. Freeman is evidence that ordinary workers in the art would appreciate the ability to have the head end perform video switching for a user's request in an interactive television environment. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hendricks with the head end-based switching of Freeman in order to reduce complexity of the user's system and reduce bandwidth necessary to transmit the plurality of available program channels. Further, it would be obvious that multiple routing units may be used to service a large number of users.

Regarding Claim 4, Hendricks in view of Freeman disclose a system as stated above in Claim 3. Hendricks further discloses that the head-end is operable to broadcast multiple program signals to each terminal using a switching plan to target advertisements to different viewers (Col. 18, Lines 20-29). As stated above, the head-end must know where each ad is scheduled in order to generate the switching plan. This reads on the claimed ad location detector for detecting advertisement locations in the presentation stream group. In combination with Freeman, when a user selects a channel of programming, the channel is switched to and transmitted to the user and the head-end

subsequently inserts targeted advertisements. This reads on the claimed detecting advertisement locations (commercial breaks) in response to the channel request and selecting one of the presentation streams that is most appropriate for the subscriber (targeted ad), generating a switching signal corresponding to that selection and switching to the stream in the group in response to the signal. Further, there must inherently be a detection signal and switching signal communicated between the various functional elements of the head-end in order for the system to properly insert an advertisement at the proper time.

Regarding Claim 5, Hendricks in view of Freeman disclose a system as stated above in Claim 4. What is not disclosed, however, is that the ad location detector detects the advertisement locations by detecting cue tones. Official Notice is hereby taken that it is well known in the art to use cue tones to indicate the placement of an advertising break in a program. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hendricks in view of Freeman with the cue tones of the well-known prior art in order to provide for ad insertion at head ends that are not equipped to receive and process computerized schedule information.

Regarding Claim 6, Hendricks in view of Freeman disclose a system as stated above in Claim 4. Hendricks further discloses that a switching plan is generated and the head-end selects targeted advertising based on the commercial break locations as stated above. This reads on the claimed ad location detector detecting the advertisement locations based on scheduled avail information (switching plan).

Regarding Claim 7, Hendricks in view of Freeman disclose a system as stated above in Claim 4. As stated above, the head-end of Hendricks is operable to insert advertising that is targeted to users based on a profile developed from, inter alia, previously watched program data. This reads on the claimed selector selecting a presentation stream (advertisement) by comparing market segment characteristics associated with advertising (Col. 27, Lines 48-56 and Tables D-L) corresponding to the detected advertisement locations (commercial breaks), with characteristics associated with the subscriber (user profile) served by the routing station (head-end) and by identifying a presentation stream (ad to display) based on the comparison.

Regarding Claim 8, Hendricks in view of Freeman disclose a system as stated above in Claim 7. Hendricks further discloses that the spot placed in the program break serves as a default advertisement (Col. 27, Lines 56-59). Further, a priority algorithm is put in place to device which ad to display in case of an ambiguous command to switch to two different channels (Col. 30, Lines 41-44). This reads on the claimed selector selecting a default presentation stream in the group as the most appropriate stream if the comparison does not identify a presentation stream.

Regarding Claim 22, see Claims 2-3 above.

Regarding Claims 24-28, see Claims 4-8 above, respectively.

5. Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of U.S. Patent No. 6,493,875 to Eames et al.

Regarding Claim 10, Hendricks discloses a system as stated above in Claim 2.

What is not disclosed, however, is that the routing station is located at a USAM device in a switched digital video system. Eames discloses a residential video distribution system (See Figure 2) wherein a USAM (340 and Col. 4, Lines 4-9) is used to route data to a home system including a TV (199) in a switched (Col. 2, Lines 60-63) digital video system (See Figure 3, Col. 2, Lines 64-65 and Col. 5, Lines 8-11). Eames is evidence that ordinary workers in the art would have recognized the benefits of using a USAM device in a SDV system for transporting video data to an end user. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hendricks with the USAM device of Eames in order to support broadband video delivery to residential customers in homes that do not have coaxial cable wiring as disclosed by Eames (Col. 1, Lines 29-33).

Regarding Claim 30, see Claim 10 above.

6. Claims 12-14, 34-35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of U.S. Patent No. 6,684,194 to Eldering et al.

Regarding Claims 12 and 13, Hendricks discloses a system as stated above in Claim 1, wherein the system gathers data including what channels a user watched and for how long (Col. 20, Lines 20-23). Hendricks further discloses a switching plan, as stated above, that is developed at the operations center to direct terminals to different ads at program breaks (Col. 26, Lines 37-41). Further, the occurrence of program breaks is known (Col. 27, Lines 31-32) and the spot placement engine uses break timing and feeder

channel availability information in order to determine optimum spot placement (Col. 27, Lines 48-50). This break (avail) timing information identifies the time durations between adjacent avails in each presentation stream such that the spot placement engine can allocate feeder channels to service the breaks at the correct times. What is not disclosed, however, is that the channel change information identifies probabilistic percentages of subscribers who would likely change their channel during different time durations.

Eldering discloses a subscriber identification system that monitors the activity of the users and generates profiles including channel change information (Col. 2, Lines 49-65) and the corresponding time (See Figures 3 and 6A). Eldering further discloses processing the channel change data (See Figure 6A and Col. 4, Lines 35-45) in order to generate a correlation between the subscriber's income and channel change frequency (Col. 5, Lines 45-55). Using the subscriber selection data, the system can determine which subscriber is most likely to be viewing the programming (Col. 5, Line 56 – Col. 6, Line 10). This reads on the claimed channel change statistical information identifying probabilistic percentages of subscribers (See Figure 6F) who would likely change their channels during different time durations (See Figures 3 and 6A). Further, it is well known in the art to use an average percentage when analyzing the probabilities of certain groupings as shown in Figure 6F. Eldering is evidence that one of ordinary skill in the art would have recognized the benefits of identifying the probabilities of subscribers who would likely change their channels in a subscriber profiling system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hendricks with the channel change probabilities of

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Eldering in order to better identify subscribers by age and income in order to more effectively target advertising.

Regarding Claim 14, Hendricks in view of Eldering disclose a system as stated above in Claim 12. Hendricks further discloses a system wherein exact timing information of each avail is known as stated above. The time duration between adjacent avails inherently corresponds to the time duration from the end of one ad to the start of another ad because there must always be a measurable period of time between different advertisements. The claimed duration could be anything from zero seconds (back-to-back ads) to any number of minutes between ads.

Regarding Claim 34, see Claim 12 above.

Regarding Claim 35, see Claim 14 above.

Regarding Claim 37, see claim 13 above.

Allowable Subject Matter

7. Claims 15 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- a. U.S. Patent No. 6,088,722 to Herz et al. discloses a CATV system with customer profiles for generating virtual channels of targeted programming.
- b. U.S. Patent Application Publication 2001/0013124 to Klosterman et al. discloses a TV system for displaying substitute video advertising by using viewer profiles and a plurality of channels related to a main programming channel.
- c. U.S. Patent No. 5,600,573 to Hendricks et al. discloses a television distribution system wherein an operations center services multiple head ends.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew R Demicco whose telephone number is (703) 305-8155. The examiner can normally be reached on Mon-Fri, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



mrd
January 20, 2005


CHRIS GRANT
PRIMARY EXAMINER